

I: THE EARLY YEARS

What on earth were they fighting over?

To read the early history of recording, you would think that these people were arguing over shares of Microsoft stock or territory in the Middle East. These pioneers, some of whom really did have good intentions, were soon caught up in imbroglios, lawsuits and just plain nasty arguments that could make your head spin. It's also rather hard to disentangle the various threads nowadays because, like all real history, none of it happened in a neat, linear fashion, but all jumbled together, lines drawn in the sand spilling all over each other as the tides of music fashions and different musical agendas rushed in from an ocean of public consumers.

Reduced to essentials, it all seems so neat: Thomas Edison invents first practical phonograph in 1877, sets it aside for 12 years and doesn't bother to market or develop it as he turns his attentions to other matters (specifically electric light); other inventors pick up the thread around 1889, ten years later the flat disc begins to make significant inroads on the cylinder, by 1913 Edison throws in the towel and starts making flat discs of his own, in 1925 electrical recording replaces the old acoustical method, by which time radio is making significant inroads on the record industry itself. By 1930, thanks to the overwhelming popularity of radio and the Depression, the record industry is floundering; new techniques and marketing ideas help keep it afloat through the Depression and War years, then it blossoms in a Renaissance of long-play albums, stereo sound and a seemingly unlimited market. Everyone lives happily ever after.

But that is only if you view the essentials, not the details. And those details include a great many brilliant, inventive and market-driven men who had in their mind the idea to preserve and disseminate good music for the ages. For even from the start of the commercial record industry, there were people who knew, or at least felt, that what they were doing was for posterity as well as for the present. And this, perhaps, is what caused all the rancor: everyone wanted to be The One remembered for their foresight and brilliance.

Perhaps because he himself was business-oriented and not music-oriented, Thomas Edison initially had no interest in recording music. Shortly after inventing the phonograph in 1877, he established the Edison Speaking Phonograph Company; its goal was to develop and promote what became known as the Dictaphone for business transcribing purposes. It had five stockholders including Gardiner G. Hubbard, Alexander Graham Bell's father-in-law. The company bought the tin-foil phonograph patent for \$10,000 and a guarantee of 20% of future profits. After initial demonstrations of the new invention, like the one at Rideau Hall, however, the company went dormant and Edison turned his attention elsewhere.

In 1885, a second type of phonograph was invented by Chichester Bell and Charles Tainter; they were granted patent 341,214 on a machine that they called the "Graphophone" using wax-coated cylinders incised with vertical-cut grooves. In 1887, a third type of phonograph was invented by Emile Berliner; he was granted patent 372,786 for a "Gramophone" using a non-wax disc photo-engraved with a lateral-cut groove. This, then, was the earliest of the "phonograph wars": a battle between the cylinder and the flat disc, and between vertical-cut and lateral-cut grooves. For the uninitiated, a "vertical-cut groove" makes the needle vibrate up and down in the record; "lateral-cut" makes the needle vibrate side-to-side in the groove. The difference between the two is subtle but significant. Because the grooves of a record simulate sound waves, it is easy to visualize this difference. A lateral-cut groove must have "room" for medium and loud passages to vacillate back and forth on the record, which means that the playing time is defined by how loud or soft a piece of music is. A vertical-cut groove, which causes the needle to vibrate up and down, does not take up any more space on the record or cylinder surface regardless of how loud the passage is. This allowed cylinders,

and later flat discs using the vertical-cut process, to put more spoken words or music on the record than its lateral-cut cousins. Moreover, many people, particularly Edison, claimed that vertical-cut grooves had better sound, a fuller frequency range and less surface noise.

Sparked by this sudden and (to him) unexpected competition, Edison suddenly returned his attention to the phonograph, filing a patent for a machine with a battery-powered electric motor and improved wax cylinders, but neither he nor the graphophone inventors were able to mass-produce copies. On May 16, 1888, Emile Berliner demonstrated an improved early gramophone at the Franklin Institute using a flat 7-inch disk with lateral-cut grooves on one side only, hand-cranked at 30 rpm with 2-min. capacity. Berliner was thus the first to mass-produce hard rubber vulcanite copies from a zinc master disk.

Though there had already been considerable competition between the two rivals, Edison's Phonograph Company and American Graphophone both agreed to allow a wealthy businessman, Jesse Lippincott, form the North American Phonograph Co. in 1888; this company would oversee a sales network of local companies licensed to lease phonographs and graphophones as dictation machines. Lippincott agreed to invest \$200,000 in the American Graphophone company and to purchase 5,000 machines a year. He bought control of Edison's patents for \$500,000, and Edison set up Edison Phonograph Works to manufacture and develop the phonograph. Lippincott's enterprise soon failed, however, and in 1890, the North American Phonograph Company went bankrupt. Edison, as its major creditor, took over operation of the business. When it became apparent that he could not assert control over the local licensees, he reorganized the company and founded the National Phonograph Co. in 1896.

In early 1889, The Columbia Phonograph Co. was organized by Edward D. Easton with rights to market a treadle-powered graphophone; however, Easton would have more success selling music rather than business machines, especially cylinders of the popular United States Marine Band under John Philip Sousa. Easton produced the first record catalog in 1890, a one-page list of Edison and Columbia cylinders. Thus immune from Edison's take-over, Columbia became a leader in recording cylinders for coin-operated phonographs. When the North American Phonograph Co. failed, Columbia became the sole licensed seller of graphophones in North America.

While Edison was struggling with the bankrupt North American Phonograph Co. and Columbia was establishing itself as a major player, Emile Berliner quietly stepped onto the field and complicated the quarrel. In 1893, he set up the United States Gramophone Co. to attract investors for the gramophone. He hired brothers Fred and Will Gaisberg, former employees of Columbia who had prior recording experience, and together they found a Philadelphia-based syndicate which agreed to contribute \$25,000 to fund Berliner's enterprise. The Berliner Gram-o-phone Co. was established in Philadelphia to manufacture sound recording equipment and discs under license from the United States Gramophone Co., which retained the gramophone patents. Berliner and the Gaisbergs then engaged the services of Frank Seaman to undertake advertising, distribution, and sales of the gramophone. To this end, Seaman formed a third company, the National Gramophone Co. Ultimately, the Berliner Gram-o-phone Company would be involved in a legal battle with Seaman and the Universal Talking Machine Co. (a company affiliated with the National Gramophone Co.), which would drive Emile Berliner out of the gramophone business in the United States.

By 1898, the gramophone business was booming and officials at Columbia were becoming worried. Unwilling, or perhaps unable, to compete in the marketplace without an extra advantage, Columbia set its sights on Berliner's patents. A complex legal battle ensued, involving not only the American Graphophone Co./Columbia Phonograph Co. party and the Berliner Gram-o-phone Co., but also Edison Phonograph Works, F.M. Prescott (an exporter),

and Frank Seaman. When hostilities were brought to a close, a court injunction remained preventing Berliner from using the word “gramophone” on any of his products in the United States. This prompted him to establish E. Berliner, Montreal in 1899 which would hold exclusive rights to gramophones and discs in Canada (based on a Canadian patent of 1897), and to sell the rights to his American patents to his associate Eldridge Johnson, who had first been contracted by Berliner and Gaisberg to develop an effective motor for the gramophone. In 1900, Johnson set up the Victor Talking Machine Co., taking over the Berliner interests in the United States. For the time being, relations between Victor and the international Berliner affiliates, including E. Berliner of Canada, remained cordial.



[L] The Berliner Gram-o-phone Company store at 2315-2316, Sainte-Catherine St., Montréal



[R] The main display room of the Berliner Gram-o-phone Company store, 1913

According to Canadian law at the time, a patent was protected only if the manufacturer established production in Canada, and Berliner was happy to comply. He imported equipment from the American affiliate, set up shop in space rented from the Bell Telephone Co., and opened a retail outlet at 2315-2316 Sainte-Catherine Street in Montréal. The company began an intense promotion of the gramophone, highlighting the volume, endurance, and space-saving size of discs as opposed to cylinders. The advertisements also served to warn Berliner's competitors against infringement of the company's patents, and to caution consumers against purchasing imitation equipment and recordings. It was not long before E. Berliner, with Emmanuel Blout as general manager, was prospering.

During these very early years, there was the consideration of what to record. Popular minstrel songs and marching band tunes were all the rage; oddly enough, the ragtime craze which swept the country from the mid-1890s onward was considered too “regional” a fad to bother recording, and so all the great pioneers of this miniature but intriguing art form – Scott Joplin, Joseph Lamb and Eubie Blake – had to wait years, even decades, before they were recorded at all. Joplin, in fact, never made any records, but there are a few rare if unsatisfactory piano rolls in existence of him playing his own music.

In the late 1890s, Berliner began recording opera singers on his label. Among the various singers who recorded for him were such regional favorites as mezzo-soprano Ramona Galan, tenor Ferruccio Giannini (father of the better-known soprano Dusolina) and American coloratura soprano Ellen Beach Yaw, best-known nowadays for her ability to trill in thirds and fifths. He was also lucky enough to record two of the finest singers of international repute, tenor Nicolai Figner of the Russian Imperial Opera and his wife, the Italian soprano Medea Mei; but none of these crude early records shows very much. Nor did the few rare re-

cordings made of two fabled violinists, Pablo de Sarasate and Bronislaw Huberman. Sarasate, unfortunately, made no further recordings, but Huberman, though he always disliked the process, has fortunately left us a treasure trove of better-recorded discs.



[L] An early E. Berliner black disc with the English angel trademark in the label area.

[C] An early E. Berliner disc stamped from an American master, circa 1898.

[R] An E. Berliner, Montreal disc with the HMV symbol etched in grooves, circa 1900

The early Berliner discs had etched “labels.” Some were quite plain, containing just the company name and information about the song and artist; others included the “recording angel” which was the logo for the Gramophone & Typewriter Co. of London, England, with which Berliner had a contractual agreement allowing them to issue his lateral-cut flat discs. Between them, they rapidly cornered a market that was otherwise filled with cylinder companies all vying for attention.

During roughly the same period, other entrepreneurs were investing time, money and ingenuity into developing better systems of recording and reproducing music. Among the most interesting was Gianni Bettini (1860-1938), who recorded and sold cylinders in New York City in the 1890s. Bettini's patented improvements to existing cylinder machines included a playback device which purportedly improved the sound quality of recordings. Bettini cylinders are among the rarest in existence. The most intriguing of those he made were recordings of President Benjamin Harrison and Mark Twain, both now lost. Bettini recorded many opera singers, most of whom were unfortunately not big-name artists. Among his few “name” singers were sopranos Gina Ciaparelli-Viafora and Marcella Sembrich, who sounded “white” and hooty on records. He also recorded Pope Leo XIII singing religious songs at the Vatican. In 1895 he recorded the aria “L’eclat de rire” from Auber’s “Manon Lescaut” by a little-known soprano, but for nearly 100 years this cylinder was purported to be by the great Adelina Patti, who supposedly used a pseudonym because, in those days, truly great singers considered the gramophone little more than a nasty-sounding toy, not worthy of serious consideration.

Yet one must take these, and all further discussions in this chapter of “improved sound,” with a huge grain of salt. The acoustic recording process was extremely limited in what it could represent with anything like “fidelity” because of its built-in sonic limitations. First and foremost among these was the frequency range, which went from about +3 decibels to a flat response in the range between 50 Hz and 3,000 Hz, or roughly from a bass low A to the contralto high G. This range not only cut out all other frequencies but also the *overtones* to voices and especially instruments that allows our ears to hear things realistically. As time went on the best companies, Edison and Victor, eventually increased the frequency range a bit, but only by means of warmer, more resonant studios were they able to slightly increase the amount of overtones captured. This meant that the performers themselves had to provide

their own resonance. When the voice or instrument was capable of doing so, the resultant recording was semi-realistic, but when they weren't, the result was a flat response that "deadened" the sound. This is but one reason why certain voices and instrumentalists were or were not "phonogenic" and, in the case of complete orchestras, the sound remained crude and circumscribed no matter how much the companies touted "realistic sound," Edison included.

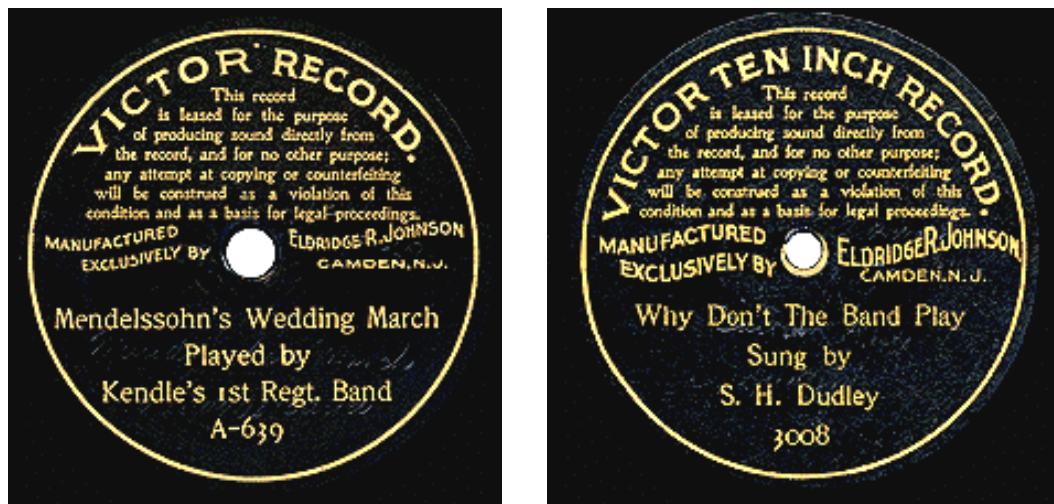
The biggest advantage of the flat disc, at least initially, was that it could be mass-produced. A metal "stamper" could be made from the original zinc master, from which an endless supply of copies could be made. Cylinders, on the other hand, were...well, cylindrical, and that posed a problem. Initially, the only ways copies could be made was to have the artists sing or play into a recording horn connected to multiple metal tubes, which could then make fifteen or twenty cylinders at a time; this was repeated until about a hundred or so copies were available for sale. A notable technological triumph of the Edison Laboratories was devising a method to mass produce pre-recorded phonograph cylinders in molds. This was done by using very slightly tapered cylinders and molding in a material that contracted as it set. To Edison's disappointment, the commercial potential of this process was not realized for some years. Most of the regional Edison distributors were able to fill the small early market for recordings by mechanical duplication of a few dozen cylinders at a time. Molded cylinders did not become a significant force in the marketplace until the end of the 1890s.

Mass-producing cylinders at Edison's New Jersey recording studio largely ended the local Edison retailers' early practice of producing recordings in small numbers for regional markets, and helped concentrate the USA recording industry in the New York City - New Jersey area, already the headquarters of the nation's Tin Pan Alley printed music industry. Meanwhile, as offshoots of the Berliner Company, there was the Gramophone & Typewriter Company in England and the newly-formed Victor Talking Machine Company in America. In 1901, G&T hired the Gaisberg brothers away from Columbia; this proved to be a move of monumental proportions, completely reversing the fortunes of both companies, for Will Gaisberg was a marketing genius of his time while brother Fred was one of the most discerning judges of musical talent, particularly opera talent, in the early years of the gramophone. Meanwhile, in America, Eldridge Johnson was trying – amidst his own legal battles – to set up the Victor as a viable player. In the beginning, like others, they recorded famous speeches of the past recreated by contemporary actors; famous actors and pop performers of the present; and the ubiquitous marching band music. At first they could not hire the services of the Sousa Band away from Columbia, but they were able to record the Sousa Band's star cornet



ist, Herbert C. Clarke, in a number of solos that are still studied today for their musical style as well as Clarke's perfect technique.

The previous page shows two early Johnson record labels. The first, on the left, was a seven-inch disc introduced in the spring of 1900. On March 1, 1901, the courts ordered Johnson not to use the word "Gram-o-phone" on his products—undoubtedly, a lawsuit from Emile Berliner. The result was the Improved Record label, which dropped the Consolidated Talking Machine Company's name. This label also reflected Johnson's move from Philadelphia to Camden, although some reverse-side stickers from this period list both cities (the studio remained in Philadelphia for some time after the move). In 1900 he changed the name of his company to Victor, though the remaining title "Talking Machine Company" would come later. Here are two of the earliest "Victor" labels:



The disc on the left is a standard seven-inch Victor record of the time. The one on the right is an extremely rare Victor ten-inch label which marked the introduction of larger-diameter Victor discs. This label was in production for only a short time, probably in early-to-mid 1901, before being replaced by the Monarch label. #3008 was recorded on January 5, 1901. The more famous and popular Victor labels, including the early Monarch label, were still to come; but in the meantime, two years earlier, the Gramophone & Typewriter Co. made a deal for an insignia or "logo" that was to become a cultural icon.

A Dog, A Machine, An Icon

Nipper the dog was born in Bristol in Gloucester, England in 1884, so named because of his tendency to nip the backs of visitors' legs. When his first master, Mark Barraud, died destitute in Bristol in 1887, Nipper was taken to Liverpool in Lancashire, England by Mark's younger brother Francis, a painter. In Liverpool Nipper discovered his new owner's Edison cylinder phonograph; the younger Barraud "often noticed how puzzled he was to make out where the voice came from." This scene must have been indelibly printed in Barraud's brain, for it was three years after Nipper died that he committed it to canvas.

Nipper died in September 1895, having returned from Liverpool to live with Mark Barraud's widow in Kingston-upon-Thames in Surrey. In 1898, Francis Barraud completed the painting and registered it on 11 February 1899 as "Dog looking at and listening to a Phonograph."



Barraud decided to rename the painting “His Master's Voice,” and tried to exhibit it at the Royal Academy, but was turned down. He had no more luck trying to offer it for reproduction in magazines. “No one would know what the dog was doing” was given as the reason! Next on Barraud's list was The Edison Bell Company, but again without success. “Dogs don't listen to phonographs,” the company said.

Barraud was given the advice to repaint the horn from black to gold, as this might better his opportunity for a sale. With this in mind, in the summer of 1899 he visited 31 Maiden Lane, home of the newly formed Gramophone Company, with a photograph of his painting and a request to borrow a brass horn. As Barraud later wrote in an article for *The Strand* magazine: “The manager, Mr. Barry Owen, asked me if the picture was for sale and if I could introduce a machine of their own make, a Gramophone, instead of the one in the picture. I replied that the picture was for sale and that I could make the alteration if they would let me have an instrument to paint from.” On 15 September 1899, The Gramophone Company sent Barraud a letter making him a formal offer for the picture, which he immediately accepted. He was paid £50 for the painting and a further £50 for the full copyright. The deal was finally confirmed on 4 October 1899 when a representative from The Gramophone Company saw the amended painting for the first time.



This painting made its first public appearance on The Gramophone Company's advertising literature in January 1900, and later on some novelty promotional items. However, "His Master's Voice" did not feature on the Company's labels until 1902, or on its British letter headings until 1907. The painting and title were finally registered as a trademark in 1910.

It was also in 1900 that Emile Berliner asked Barry Owen to assign him the copyright of "His Master's Voice" for America. Owen agreed, as he did in 1904 to a similar request from Japan. But again, the logo was only used in the company's print advertising at first, not on the actual record labels.



[L] An advertisement for E. Berliner, Montreal, showing the newly trademarked HMV logo, 1900
[R] An advertisement for E. Berliner, Montréal, 1901.

Meanwhile, Francis Barraud spent much of the rest of his working life painting 24 replicas of his original, as commissioned by The Gramophone Company. Following his death in 1924, other artists carried on the tradition until the end of the decade. During its long active life, the "His Master's Voice" label has enjoyed a unique reputation with both the music business and the public. Over the years a healthy market has developed in collecting the vast array of items produced in its image. A Collectors' Guide, originally published in 1984, was updated for publication in 1997.

And here is where the Gaisberg brothers, and Eldridge Johnson, capitalized on the image to promote theirs as "quality" gramophone labels. In 1902, the same year G&T launched its "His Master's Voice" labels, Fred gained a sextuple *coup* in the opera world by recording six of the finest singers in the world, all of whom, miraculously, recorded very well: sopranos Emma Calvé, and Antonina Nezhdanova, bass Feodor Chaliapin, tenors Fernando de Lucia and Enrico Caruso, and Italian baritone par excellence Mattia Battistini. G&T lost Caruso to Victor in 1904 and Nezhdanova, who rarely sang outside of Russia, never became an international favorite until after her death; but the others were mainstays of the G&T, later HMV, catalog for years, and even after Caruso left for Victor and de Lucia left for the Fonotipia label in 1910, their HMV recordings remained best-sellers.

The Caruso case is intriguing for a number of reasons, not least the fact that he became the first classical artist to be aggressively marketed. He had, in fact, made records before he met Gaisberg, three cylinders for the Anglo-Italian Commerce Company in 1901 (later sold to Pathé, who reissued them as both cylinders and flat vertical-cut discs...plus one very interesting disc which we will note later). But they had no marketing and limited distribution. When Gaisberg, who heard Caruso sing with Toscanini at La Scala, Milan, sent a wire to company headquarters requesting permission to record the tenor—ten sides for a flat fee of \$250—he was told, "Do not record. Fee exorbitant." But Gaisberg ignored their cable, paid Caruso out of his own bank account, then took the masters back to England where they were pressed into records featuring the new "dog and phonograph" logo. Armed with this treasure trove,

brother Will marketed the Neapolitan tenor aggressively.

Those early G&T Caruso discs had musical flaws; the performances were casual, even sloppy—they sounded like the tenor was merely running through the pieces, possibly reading from the scores. But the voice had a miraculous sheen that literally jumped off the grooves and into the listener's living room. No one who has not heard an original Caruso record, G&T or Victor, played on an original machine, will have any idea what I am talking about. The primitive horns that reproduced the sound of the records simply reverberated with a richness and power that some even suspected was artificial—until they heard Caruso in the flesh, at which time they realized that he was, if anything, even better than the records. And so the legends fed off each other: Caruso the live performer and Caruso the recording giant.

Ironically, in 1901—the year Caruso made his first non-Gramophone discs—another big-voiced tenor made his recording debut. This was Leo Slezak, the star tenor of Gustav Mahler's Vienna State Opera, a hulking giant of a man who could and did sing literally everything from Mozart to Wagner. Unlike Caruso, who struggled in those early years to master control of his glorious but sometimes unwieldy voice, Slezak blended head and chest registers into a seamless blend; his musicianship was without peer in his time; and by all accounts, he was something Caruso was not, an impressive and accomplished stage actor. But unlike Caruso, Slezak's voice did not always record well. He had, simply, too much power in his top range for the sensitive cutting needles to handle. In his more stentorian arias, he was turned around to face the back of the studio wall, much like the American contralto Louise Homer, but even so his top notes, which sounded "like a rocket going off" in live performance, came across as "overloaded" on records; and the golden sheen of his voice at medium volume, the otherworldly beauty of his soft singing, was often offset by the ugly sounds that the gramophone made of his powerful high notes.

Yet Slezak was the one tenor Caruso was most jealous of. When Slezak garnered international praise for his singing of *Lohengrin* in Vienna, Caruso in 1901 sang the role while on tour with Toscanini in Buenos Aires; because Slezak was famous for singing Raoul in "Les Huguenots"—certainly a role unsuited by its musical character for a Latin voice—Caruso had to sing it, and record arias from it, himself. Because Slezak was famous for Eleazar in "La Juive," Caruso assumed this role too in 1918; and towards the end of his life, he was working on assuming the biggest Slezak role of all, that of Verdi's "Otello."

But in one particular instance, it was a *recording* by Slezak that influenced not only Caruso but later generations of tenors: the aria "Magische töne" from Goldmark's "Queen of Sheba," an opera which by then (1905) was very rarely performed. Floated beautifully on the breath in a fine legato style, Slezak—the stentorian tenor—rose to a magical pianissimo high C at the end. This was the envy of the tenor world at that time, but none save Caruso dared to take Slezak on. In 1909 he recorded his own "Magiche note" (in Italian) and attempted the pianissimo high note; but Caruso's recording sounded wrong, the soft phrases and soft final note oddly detached from the rest of his voice.

In November 1903, based primarily on the strength and popularity of his G&T recordings, Caruso was hired to sing at the Metropolitan Opera. His debut as the Duke of Mantua in "Rigoletto" was coolly received by critics, who were disappointed by his crude acting style, though they praised the rich, velvety sound of his voice. But Calvin Childs, Victor's A&R man, knew a goldmine when he saw one, and so he signed Caruso to a five-year contract. The first Caruso recordings for Victor were made in February of 1904, and they set a very high standard for the years to come. These records were originally issued bearing the title "Monarch Record" on the label—"De Luxe" for twelve-inch records—an odd designation for a company that would eventually drive the name "Victor" into the public conscious-

ness; but crude as they were, they sold so well that Victor soon jacked up the price of his records to \$2 for a ten-inch disc, \$3 for a twelve-inch disc, and a whopping \$5—a full week’s salary for a working-class person—for “celebrity ensemble” records with Caruso like the sextet from “Lucia di Lammermoor” and the quartet from “Rigoletto.”

Contrary to normal expectations, these records did not languish on dealers’ shelves. They sold out, in fact. For, as the early record industry was rising from minstrel songs and marching bands to grand opera, the possession of a Caruso record—or several—became a status symbol for middle- and working-class Americans.



The evolution of Victor’s iconography can be easily seen in the above label sequence. Both “Monarch” and “De Luxe” were early designations; I have no idea why Johnson briefly abandoned the Victor name. The black label, which had earlier been felt to symbolize solidity and honesty, remained an industry standard for decades; in addition to Victor and Berliner, Columbia, Compo, Odeon and G&T all had black labels. But the red label was something new; it was meant to characterize a “star class” record, something better than the norm; and oddly enough, the strategy worked. By 1915, Victor’s “Red Seal” label had come to symbolize Quality with a capital Q, so much so that the label took out a patent on the color—one that would be successfully challenged, but not until a quarter-century later, by rival Columbia.

The first Monarch disc is the “Habañera” by Zolie de Lussan, a renowned Carmen in her day. The first De Luxe label is a standard non-celebrity classical disc of the period: De Luxe was the company’s original designation for twelve-inch discs. But the second De Luxe label

is a rarity, a short-lived series of 60-rpm, fourteen-inch discs introduced in March 1903. Company files no longer exist for these monstrous long-playing discs, few of which survive today. Next we have one of the early Caruso records, in this case “Questa o quella” from “Rigoletto,” the role of his debut. This is a repressing from 1905; in March of that year the company discontinued Monarch and De Luxe in favor of the Victor designation on all sizes.

It is often forgotten nowadays that Victor had other color labels as well. A dark green label was used for instructional discs, among them massive sets of the “Oscar Saenger Singing Method” for all voice ranges, soprano, contralto, tenor, baritone and bass (the soprano method featured one of his prize pupils, Olive Kline). There were also blue-label discs for classical vocal records by name singers who were not “quite” of the celebrity status, such as soprano Kline, tenors Paul Althouse and Paul Reimer, and a purple label, apparently reserved for singers who were considered better sellers than Kline or Althouse but not quite “Red Seal” status. We shall meet one of the most remarkable of these later in the book.

In 1905-1906, the Gaisberg brothers unveiled their biggest project of the acoustic era: an abridged recording of Verdi’s opera, “Ernani.” Rather than try to record the full opera, which would have taken up forty single-sided discs, they wisely presented 24 discs that gave listeners an abridged performance. Not so wisely, they chose to present a kaleidoscopic cast, meaning one that changed from side to side. By this arrangement, then, we had no less than five sopranos singing Elvira, four tenors singing Ernani, four basses singing Silva and three baritones singing Don Carlo, of which star baritone Mattia Battistini was one. This was an early case of using one “star” singer to sell a complete opera, a device used more than a decade later by the Phonotype company when tenor Fernando de Lucia was the centerpiece of their complete operas of “Rigoletto” and “Il Barbiere di Siviglia.”

The popularity of the records by Caruso, Battistini and Chaliapin, in addition to their prestige as artists, attracted other singers who had heretofore refused to record. By 1906 G&T, now “His Master’s Voice” or HMV, had signed three of the world’s greatest and most famous singers: sopranos Adelina Patti and Nellie Melba, and tenor Francesco Tamagno, who had created the role of Verdi’s “Otello” in its world premiere. But none of these three singers were content even with a “red seal” designation: they insisted on special label colors of their own. Patti’s records were issued with a bright pink label; Melba’s were mauve; and Tamagno’s were orange. In addition, they insisted that their names be printed on the label in large capital letters, bigger than that of the composer or selection! Truly, this was the beginning of creative marketing; and HMV’s American cousin, Victor, certainly did their share. By the end of the first World War, Victor had in their stable seven of the biggest names in opera: Caruso, Luisa Tetrazzini, Amelita Galli-Curci, Johanna Gadski, Geraldine Farrar, Giuseppe de Luca and Titta Ruffo, but the perspective of time and changing tastes have made a different selection from the Victor roster. Though Caruso is still idolized for his quality of voice, the phlegmatic quality of his artistic sense has now been called into question; de Luca is still admired to a point, but the real gems of the Victor catalog are now seen as sopranos Gadski, Frances Alda and Lucrezia Bori; tenors Edmond Clément, John McCormack and Tito Schipa; and the bass Marcel Journet, often taken for granted back then as the “fill-in” bass on operatic ensembles, but now recognized as one of the greatest singing musicians of his time.

“Star Wars” on record: Columbia and Odeon strike back

Not to be outdone by G&T and Victor—some of whose early celebrity records were, of course, G&T masters leased from England (Calvé, de Lussan, de Lucia and Battistini among them)—rival Columbia in 1903 initiated its “Grand Opera” series. Among the treasures in

this series were some of the most stellar names in the classical world: not only such luminaries as Marcella Sembrich, Ernestine Schumann-Heink and baritone Charles Gilibert, all of whom would later defect to Victor, but also some exceptional artists who never recorded for any other label, particularly soprano Suzanne Adams and the great bass Edouard de Reszke. But this is one time when “preserving for posterity” went afoul, for de Reszke was not in good voice that year, or for those recording sessions, and so all we have of him now are these dull, leaden-sounding artifacts—certainly nothing he would want to be remembered by. Indeed, his records came out so badly that when his younger brother Jean, one of the world’s greatest tenors, was lured into making one record for Fonotipia in 1905, he refused to approve its release and ordered the master destroyed.

But after this auspicious beginning, Columbia fell on hard times. Though they managed to sign a few name singers thereafter, among them sopranos Lillian Nordica and Olive Fremstad, tenors Florencio Constantino, Alessandro Bonci and Morgan Kingston, and baritones David Bispham and Riccardo Stracciari, few of them were really “phonogenic”; moreover, in America, where name value and promotion meant everything, these were not “magic” names among opera-goers, but solid, conscientious artists who were admired by their peers but not by the thrill-seeking, high-note-loving public. Plus, the Columbia label was dull as dirt, changing from a plain black paper with silver lettering similar to early Berliners to a dull, dark blue with big golden notes in the middle. They managed to survive, and compete, by signing



several major popular artists such as Bert Williams, Sophie Tucker and Al Jolson, as well as by introducing the first double-sided records in 1908.

Odeon was the creation of the International Talking Machine Company (24 Lehderstrasse, Berlin). The company was founded in 1904 by Max Strauss and Heinrich Zunz, with financial backing from Frederick M. Prescott, who had recently resigned as head of the European branch of Zon-O-Phone. Carl Lindström, who would eventually develop the new company into a major force in the international recording industry, entered the picture after International purchased his small manufacturing plant. Lindström's genius lay in invention and production, not music. Max Stauss once described Lindström as "unmusical and hard of hearing," not unlike his American counterpart, Thomas Edison.

The International Talking Machine Company introduced the Odeon label in Germany in 1903, and the company lost no time in applying for a U.S. trademark. Its application, filed at the Patent Office on November 5, 1903, claimed use of the Odeon brand on records since October 1 of that year. The company soon attracted attention for its double-sided pressings (marketed initially in South America) at a time when single-sided records were the industry norm.

In the beginning, Odeon marketed the usual mixture of popular tunes and classical pieces, but since it was a German company its music was Teutonic-oriented. Their records were lateral-cut, in clear violation of Berliner's patents which he had sold to Victor, HMV and Columbia, but since Odeons were at first only manufactured in the U.S., not sold here or in England, they didn't pay them much attention. Yet this rather low-key label managed to attract some of the finest and most important artists of the day. In 1905-06 soprano Lilli Lehmann, an operatic legend who had sung under Richard Wagner himself at Bayreuth, made an important series of recordings covering a wide span of her operatic and song repertoire. Her voice was not as "phonogenic" as that of Nezhdanova, but it did record better than those of Nordica or Fremstad. Lehmann's voice, with its imposing stature, dramatic intensity and surprisingly fluent technique, attracted buyers from around the globe. Her records are still studied today by artists interested in her repertoire, which ranged from Handel to Wagner with lots of Mozart, Bellini and Schubert in between.

In 1908, the company made history by recording and marketing the first complete, integral opera recording with "name" singers, Bizet's "Carmen" with soprano Emmy Destinn and tenor Karl Jörn. Destinn's voice was, like Nordica's, not particularly phonogenic—it sounded like a factory whistle—but Jörn's beautiful, finely-shaded tenor captivated the record-buying audience. He would eventually become one of Edison's favorite recording tenors. The following year, Odeon unveiled a complete recording of the popular verismo opera "Pagliacci"; but, lacking star-power names (the cast included soprano Marie Dietrich, tenor Otakar Mařák and baritone Cornelius Bronsgeest), this set languished on the shelves.

But Odeon was by no means finished in the field of innovation. In 1916 they signed a young Russian bass who would eventually rival Chaliapin's fame, Alexander Kipnis. And also in 1908, the company made the first records by an Irish tenor who was becoming known in the fiercely demanding world of Italian opera, namely John McCormack.



[L] An American Odeon reissue of a 1908 John McCormack record.

[R] An American Odeon popular recording circa 1923.

McCormack was an entirely new kind of singer on records. Aside from the novelty of his being an Irish tenor in the world of Italian opera, his was a cleaner, more direct style of singing, fully conversant with the bel canto style and technique of his peers but eschewing their fussier, more elaborate styles in which rubato and portamento were the order of the day. After two years with Odeon, he signed a major contract with Victor and HMV which made

him the second-highest-paid recording tenor in the world (after Caruso, of course). Oddly enough, the two men became fast friends rather than rivals, probably because Caruso sensed that McCormack's lighter, "headier" tenor and more lyric repertoire was no competition for him. But McCormack's importance was not merely in becoming a huge record-seller for HMV and Victor, but for the fact that, in many ways, his career *became* his records. Though he sang on stage, his stage appearances were not that frequent after 1912 and, after 1921, they stopped altogether. He became primarily a recitalist who made records and, later, also sang in films and on the radio. Yet his influence and impact on the history of singing was enormous.

For one thing, he was the first recognizably great artist to perform popular and romantic songs on a consistent basis. This, of course, led some critics to dismiss him as a "serious" performer, but they could not in good conscience dismiss his recordings of *arie antiche*, Mozart and Handel arias, or the lieder of Schubert, Schumann or Hugo Wolf, all of which he excelled in, nor his recordings of songs by Rachmaninoff which—though sung in English—were praised by the composer himself as the finest renditions of his music. For another he literally created, in conjunction with violinist Fritz Kreisler, the art of the voice-violin duet, first when he went on tour with Kreisler (at the violinist's invitation) in 1910, then on a generous series of records made between 1912 and 1924. The success of the McCormack-Kreisler duets was so widespread that it led HMV-Victor to create other duos: soprano Nellie Melba with violinist Jan Kubelik and the ubiquitous Caruso with violinist Mischa Elman. These violinists were good fits for their respective singers, but their recordings lack the magic of the McCormack-Kreisler duo. There was just a perfect artistic "synch" between the two that could not be duplicated or manufactured by any other combination.

Of course, it also helped that Kreisler himself was one of the few violinists who recorded well on acoustic recordings. As the first violinist to use vibrato throughout his range, he created a lush, fuller tone that picked up surprisingly well on the old recording horn. Some commentators have claimed that Kreisler developed his full-range vibrato style as a reaction to the recording mechanism itself, but Arnold Schoenberg, who played cello with Kreisler in Austria during the 1890s, attested that the violinist was already playing this way at that time.

"Cylinder Wars": Amberol rules the Universe

While all this was going on, Thomas Edison was valiantly trying to convince a declining consumer base that cylinders had superior sound quality and were more durable than records. Perhaps it was this struggle to survive in a changing market that led him to sue the pants off anyone and everyone who competed with him; or maybe it was just because he was a nasty old man who believed that he should control every facet of everything he invented. After having discussed this back in the 1960s with people who actually worked for Edison, both interpretations are possible because both were true. Indeed, as time went on, Edison became less of an inventor himself and more of a co-opter of others' innovations. Everyone who worked for Edison had to sign a pre-employment agreement stating that anything they discovered or developed in his laboratories became, *ipso facto*, "his" inventions.

After spending a great deal of time and money establishing his phonograph as a business machine, originally called the Ediphone but later called the Dictaphone, he was caught short by the rapidly growing market of musical records as entertainment. First he had to develop a method for mass-producing cylinders, which he did; but then he had to fend off a number of independent manufacturers who had their own "improvements," including Gianni Bettini, which he solved by simply suing them.

One of the most famous (or infamous) of his lawsuits was directed towards the "Indestructible Cylinder." In 1900, one Thomas Lambert developed a successful method of mass-duplicating "indestructible" cylinders of celluloid; his patent 645,920 described making a copper negative matrix by electrolysis from a wax master, and using heat and pressure to "mould" durable celluloid copies from the matrix. It was ingenious, it worked, and it was better than Edison's cylinders. Although Lambert's patent was upheld by the courts, Edison continued to initiate expensive lawsuits to drive Lambert's company and the Indestructible Phonograph Record Company out of business by 1907.



In 1902 Edison introduced his Edison Gold Molded Records, cylinder records of improved hard black wax, capable of being played hundreds of times before wearing out. In 1908 Edison introduced a new line of cylinders playing 4 rather than 2 minutes of music on the same sized record, achieved by shrinking the grooves and spacing them twice as close together. New machines were sold to play these records, as were attachments for modifying existing Edison phonographs. In October of 1912 the new Blue Amberol Records, made of an early type of plastic, were introduced for public sale. They were much more durable than wax cylinders.

But get this: in 1915 artists' names *began to be added to the records*; previously Edison had a policy of selling based on recognition of composers and pieces, not performers. And he wondered why his record company was floundering??? Among the great artists who he, or his British affiliate Edison Bell, had managed to attract to make cylinder records for him were tenor Karl Jörn and bass-baritone Anton van Rooy, one of the finest of all Wagnerian singers—

one who had sung at Bayreuth, like Lehmann, under Wagner himself. Edison "solved" the problem of not having names on the records by having the singers introduce the piece and themselves by name on the actual record, a practice that became industry standard throughout the life of cylinders because, unlike flat discs, cylinders could not have labels on the records themselves. (The name of the piece and the cylinder catalog number were, however, printed in white engraved print around one of the slick edges of the cylinder.) But it is difficult to imagine many artists willing to make records—a nerve-wracking and artistically unrewarding process—without even having their names on them!

Perhaps as a means of promoting his cylinder recordings among the wealthy, in 1900 Edison gave a custom-built cylinder recording machine to Lionel Mapleson, the music librarian of the Metropolitan Opera. This machine had an abnormally large diaphragm and a huge recording horn, five feet long. Mapleson was granted permission to install this machine in the flies above the Met stage and record excerpts of live performances at the opera

house. Between 1900 and 1904, he managed to record most of the great artists who then sang at the Met, among them sopranos Marcella Sembrich, Lillian Nordica, Milka Ternina, Suzanne Adams, Lucienne Bréval, Johanna Gadschi, Nellie Melba and Emma Calvé, mezzos Ernestine Schumann-Heink and Louise Homer, tenors Albert Alvarez, Andreas Dippel, Carlo Dani, Jean de Reszke, Georg Anthes and Emilio de Marchi, baritones Giuseppe Campanari, David Bispham, Anton van Rooy and Antonio Scotti, and basses Pol Plançon, Edouard de Reszke and Marcel Journet. More interestingly, because these recordings were made “in-house,” they had the natural hall acoustic of the Met, which gave listeners a slightly more realistic picture of what these singers sounded like outside the confines of the studio. Unfortunately, Mapleson played these cylinders to death for his wealthy visitors over the decades; some of them he even shaved down and re-used to record his family in domestic situations. The result was a fairly large series of frustratingly short, badly worn recordings, riddled with pops, ticks and enough surface wear to drown Caruso at his loudest; yet they have been issued and re-issued since Mapleson’s death in the 1940s as examples of the “golden age of singing” in its stimulating live environment.

In October of 1913 Edison threw in the towel and the Edison Diamond Disc Record was introduced. Edison Laboratories had been experimenting with disc records for some 3 years, as the general public seemed to prefer them to cylinders. The Edison Discs—a full half-inch thick—recorded the sound vertically in the groove rather than laterally, and could only be played to their full advantage on Edison Diamond Disc Phonographs. This combination produced audio fidelity superior to any other home record playing system of the time. However, Edison Discs and phonographs were more expensive than the competitors. This, together with the incompatibility of the Edison system with other discs and machines had an adverse effect on Edison's market share. Nonetheless, Edison Discs for a time became the third best selling brand in the United States, behind Victor and Columbia Records.



The “others”: Pathé, Fonotopia, Emerson and DGG



While HMV, Edison Bell and British Columbia were vying for the record market in the U.K., and Victor, Columbia and Edison were fighting it out in the U.S., there were a few independents who also tried to edge their way into the growing market for records. Among the oldest and most distinguished of these was Pathé, founded in Paris on September 28, 1896 by brothers, Charles, Émile, Théophile and Jacques Pathé. They were primarily a film business, acquiring the Lumière brothers’ patents then designing an improved studio camera and to make their own film stock. They became famous for several innovations, among them the development of colored film stock, the synchronization of film with sound recordings (there still exists a 1908 film of unidentified actors miming to the Sembrich-Caruso-Journet recording of the “Lucia” sextet), and the newsreel.

Pathé's records were center-start from the company's entry into disc-producing in 1905 up until 1915. Among their first "celebrity" discs were the three cylinders that Enrico Caruso had made for AICC in 1901: using re-recording technology, Pathé transferred these by-now fairly worn cylinders to disc. As we will see, this was not the last incarnation of these remarkable recordings. Girard & Barnes' book *"Vertical-cut Cylinders and Discs"* gives a history of the Pathé discs. The first were made in 1905 and were wax on a cement base – as the authors say, like a cylinder flattened out. The 'label' was not paper, but the details were engraved like a Berliner. The details run around the perimeter of the label area and have some similarity to the engraved label details on the edge of cylinders. The engraved lines were filled with white or ochre pigment. Obviously, a paper label would not stick to a wax base, and maybe couldn't be attached in the pressing process. These wax discs are phenomenally rare and in 1906 they changed to shellac, still using the engraved 'label'. Paper labels didn't come in until just about the time in 1915 when they changed to outside-start and changed the speed to a nominal 80rpm. The last center-starts had a paper label of the same design as the engraved ones but the outside-starts used a more conventional design with the Pathé 'Coq' trademark.

These discs are not exactly '78s' as they go from 90 to 100 rpm (officially) and in practice from 80 to 120 rpm. It was said that Pathé chose to record using the center-start method because the end of a piece is often louder/higher in pitch than the start, and the outside of a disc is where there is greatest linear groove speed and the least tracing distortion and the most top. But what would happen if they recorded a short piece and didn't pantograph from a cylinder master? Pieces ending farther from the perimeter would mean that all that extra "high quality" space would be wasted, and the overall average sound quality would be worse. They could have fixed that by timing the piece beforehand to see how far from the center to start, since many companies made many takes of each tune at each session (just in case the master stamper broke, it was said in the early days.)



There is another reason for inside start cuts, particularly on transcription disks. When you cut a disk, "chip" material that is cut away spirals up from the cut, and tends to head for the center of the disk. Professional mastering lathes vacuum it away, but less expensive cutting systems don't have that luxury. Since it tends to go towards the center, you have less chance of it colliding with the cutting stylus if you start at the inside of the disk.

Like most record companies of that time, Pathé refused to pay Berliner and Victor-HMV for the rights to make lateral-cut records, so they were vertical-cut. They were also extremely noisy, even when new and played with the best equipment. And yet Pathé managed to become a major player in the record race, at least among lovers of art music, because their prestige as a major film and sound innovator gave them the capital and leverage to hire some of the finest singers of their day, such as soprano Claire Dux, tenors Tito Schipa, Edmond Clément and Lucien Muratore, and basses Adamo Didur and Marcel Journet (before he, like Schipa and Clément, migrated to Victor). After World War I, they also managed to lure the aging but still impressive French soprano Emma Calvé *away* from Victor. But the Pathé brothers always considered their record business to be second fiddle to their films, and so they kept slovenly registers and an even more slovenly catalog. Records came, went, and came again without any rhyme or reason. It was only their high regard in the industry for their innovative sound and film work that made them a major player.

Fonotipia, as a division of General Phonograph/European Columbia, had the right to record lateral-cut discs, and they, too, had an impressive roster of singers. Giuseppe Anselmi, Fernando de Lucia and Didur were among their stars; they were well-known and highly-regarded in Europe but, unfortunately, not in America, so their discs did not sell particularly well though they were very well-recorded and still fetch high prices.

Emerson was an odd and in some ways minor player in the classical market, except for two isolated incidents. The company was founded by Victor Emerson, who had pioneered the odd but popular "Little Wonder" records, five-inch discs of pop tunes that sold surprisingly well, while working for Columbia. When he founded his new company in 1915, he wanted to get it off to a fast start, so he relied on another recent arrival in the U.S., Pathé, which was eager to gain access to the American market. The *Talking Machine World* for May 15, 1915, announced that Emerson "will have the right to reproduce six-inch records from the Pathé Co.'s record repertoire, which will be retailed at ten cents." Access to Pathé's internationally acclaimed catalog must have seemed like a windfall to Emerson.

The initial list of little Emerson discs featured several luminaries of the Pathé catalog, such as Florencio Constantino and Harry Lauder. Like all Pathé discs of the period, the little Emersons (called "Green Label Records," though the primary color was more often turquoise) were vertically cut and played with a sapphire ball, which Emerson offered its customers for twenty-five cents. And like all Pathé discs made prior to the introduction of electrical recording, the Emersons were transcribed from cylinder masters by means of the pantograph.

But Emerson's real *coup* was in being able to present, at a time when the tenor's fame was at its absolute height, a Caruso record for only ten cents. It was, in fact, an abridged version of the "Tosca" aria, "E lucevan le stelle," which Caruso had recorded for AICC in 1901 and which Pathé reissued in 1905. So here it was again; but since Emerson's first discs, like his "Little Wonder" records, were only about five and a half inches in diameter, he didn't have room for the entire aria. So he cut it down by starting from the phrase "O dolce, dolce," which reduced the playing time to about 90 seconds. The record sounds terrible, being a dub of a dub of an already well-worn cylinder, and is of little artistic merit, but it WAS a Caruso record, it only cost a dime, and it was readily available.

The six-inch Emerson-Pathé celebrity recordings seem to have run only through # 311, and many were anonymous. At # 312 an abrupt shift is apparent, with the remaining fifteen issues being undistinguished pop and "standard" fare. The six-inch vertical-cut series seems to have disappeared around early 1916, the last known issue being an anonymous duet of "Silver Threads Among the Gold" (# 326). By that time, Emerson was recording his own masters using a universal-cut method that successfully skirted the lateral-cut patents, and the Pathé con-

nection was severed. Emerson's second claim to fame came in 1924, when they recorded American baritone Lawrence Tibbett two years before his spectacular rise to fame. But Tibbett was played badly by Emerson; since he was then an unknown commodity, and American to boot, the company issued his lone record for them under the pseudonym of an Italian baritone who recorded for another small label, Carlo Ferretti.



Deutsche Grammophon Gesellschaft, better known as DGG, started out as a division of the Gramophone & Typewriter Co. in Germany. As such, they had both the right to use the lateral cut and artists from the G&T/HMV catalog, with whom they swapped freely. They cornered the market on important German and Austrian artists, including the great lieder singer Elena Gerhardt and the famous conductor Artur Nikisch. It was for DGG that Nikisch made the first complete symphony recording in 1915, Beethoven's Fifth Symphony with the Berlin Philharmonic.

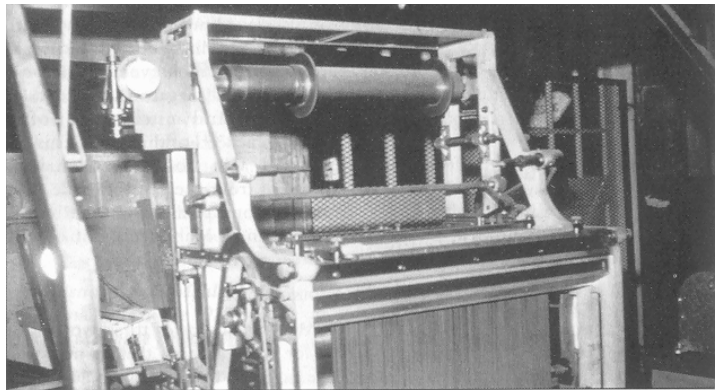


The Welte-Mignon piano rolls

All through this era of the exciting but imperfect reproduction of singers, pianists and orchestras, the popularity of piano rolls kept up the pace. After all, most records didn't really sound like a true performance, no matter how "phonogenic" the singers or players were. Piano rolls, on the other hand, lacked the human touch in another way. Since the music was

created by means of holes punched on a roll of paper which was then fed through a “tracker bar,” the player piano could reproduce the notes in rhythm but none of the subtleties of the pianist: no dynamics, no sustain pedal, no phrasing, no “touch.”

But in 1904, in Germany, a wealthy music enthusiast and inventor created a system whereby most of the delicate details of a piano performance could be reproduced. This was the firm of M. Welte & Söhne, which invented the Welte-Mignon piano rolls and player. The Welte rolls were not completely mechanical in reproduction; after each recording session musical technicians, using ink impressions made on the paper tape as well as their *recollections* of how the music had been played, punched out the holes by hand. During this process, the Welte technicians were able to introduce information regarding volume and touch in a second, secret series of punched holes. The original performing artist would then pay a repeat visit to review the finished roll and make changes if he or she heard the performance differently from the way the technicians edited it.



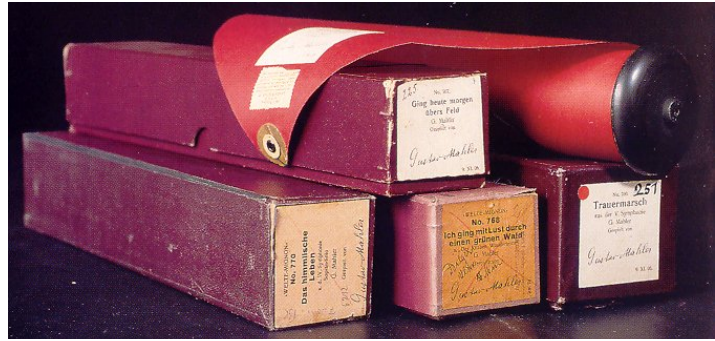
At this point, the Welte system took a left turn from most other player pianos. Rather than creating a reproducing piano, like the Duo-Art company, which could somewhat replicate a real pianist’s touch, Welte-Mignon had a device that looked like an upright piano but, where the keyboard should have been, was an upside-down device with 88 mechanical “fingers.” This was the fabled “vorsetzer,” an electronic piano-player that was wheeled in front of the piano of your choice, the mechanical fingers aligned over the keyboard, then starting the electric motor to play the actual music.

Needless to say, the elaborate mechanics and exorbitant expense of this system was its ultimate downfall. Only a few hundred wealthy music-lovers could even afford a vorsetzer, let alone the Welte-Mignon rolls which were easily three times the price of contemporary piano rolls. Considering this, it is astonishing that the company was able to continue to produce both rolls and vorsetzers until 1927, when they finally gave up. And it was not until the mid-1960s that the entire scheme, along with a treasure trove of rolls, were discovered. At this point, vorsetzers were resuscitated, recording equipment was set up, and ever since we have had stereo-recorded “performances” by the great pianists of the past.

Taking the entire system with a grain of salt, there is certainly some validity to their claims. Much as we may notice shortcomings today, the major keyboard artists of that time all flocked to the Welte studios to make rolls, among them Ignace Jan Paderewski, Josef Lhevinne, Egon Petri, Walter Gieseking, Alfred Gruenfeld, Rudolph Ganz, Teresa Carreño and Hans Haase. Even more interestingly, composers were drawn more readily to the Welte piano than they were to recordings. Among the composers who interpreted their own music on Welte rolls were Edward Grieg, Max Reger, Gustav Mahler, Claude Debussy, Alexander Scriabin, Sergei Rachmaninoff, Ferruccio Busoni and Richard Strauss.

Most of these composers also made recordings, but the rolls by Debussy and Mahler are particularly valuable to us today. Though Debussy made a few very crude discs accompanying soprano Mary Garden for Pathé in 1903, the Welte rolls—particularly of “D’un cahier d’esquisses,” “L’ombre des arbres” and “La soiree dans grenade”—are invaluable resources. The Mahler rolls have errors in them, since the composer was really not a professional pianist, yet they represent a startling difference in tempo in the finale to his Symphony

No. 4 from the written score, being much faster than we are used to hearing it today—though his tempo is very similar to that used by one of his protégés, conductor Bruno Walter, in his 1947 recording of the symphony. Thus with the Welte-Mignon rolls we reach what is probably the ultimate in musical reproduction available in the era before electrical recording, one which we know from surviving evidence was much admired by those who made them as well as by those who heard them.



The four Welte-Mignon piano rolls made by Gustav Mahler.

The decline of bel canto

In 1908, the American soprano Emma Eames, in listening to some of her Victor records, commented that she heard herself making too much rubato and too many portamento “scoops” in her singing, “like my dear friend Caruso,” and resolved to cut back on them. She did so, but only mildly; after all, this was the accepted style of singing for her time. So, too, was the similar approach that German soprano Elisabeth Schumann brought to Mozart in the 1910s, likewise the stretching-out of the musical line, with distensions and changes in tempo and dynamics, exemplified by tenor Fernando de Lucia in his recordings of all pre-verismo music.

The influence of this style, which had been a part of both Italian and German opera for at least a half-century (if we believe Henry Chorley, Hector Berlioz and Richard Wagner), was all-pervasive; even such young “mavericks” as Toscanini, Tullio Serafin, Richard Strauss and Felix Weingartner were often fighting against their own traditions. But as Toscanini once said, tradition is yesterday’s bad performance, and so as time went on, little by little, the “bad old style” was weeded out, not because it was no longer acceptable in live performance but because *it sounded annoying on records*.

Even as late as 1950, “golden age” addicts were still singing the praises of Sembrich, Eames, Tetrizzini, Farrar, Galli-Curci, Caruso, Gigli, de Lucia, Battistini, Ruffo, and others who distended the musical line. Of that group, only Caruso is still revered today, and at a much lesser level than he was forty years ago. We now recognize the musical flaws in his performances, the often clumsy phrasing punctuated by gulps for breath, that were forgiven for a century because of the golden timbre of his voice. Back then, we accepted all blindly. Now, we pick and choose our way through his recordings.

Yet even Caruso “cleaned up” his style a little as time went on. Listen, for instance, to his 1906 and 1916 recordings of “M’appari” from “Martha.” In the earlier version, his legato phrasing and breath control are unbelievable, but he stretches the line out of proportion by means of large and small applications of rubato and tenuto. In the later version, the voice is much heavier; his singing, insofar as phrasing is concerned, is sometimes unwieldy; but he is more musically and rhythmically accurate. Like Eames, he was possibly hearing through his own records how sloppy his singing had become.

With the perspective of time, musicians (as opposed to those opera lovers who do not know music) have sifted out the great artists from this era. Among them are sopranos Frances Alda, Johanna Gadski, Frieda Hempel and Antonina Nezhdanova; mezzos Louise Homer and Louise Kirkby-Lunn; tenors Edmond Clément, Hermann Jadowker, Karl Jörn, John McCor-

mack, Tito Schipa and Jacques Urlus; baritones Peter Dawson, Emilio de Gogorza (who also happened to be Victor's classical A&R man), Giuseppe de Luca and Anton van Rooy; and basses Marcel Journet and Alexander Kipnis. As for Chaliapin, he was, as one critic put it, the artist most in need of being seen in order to be heard properly. On records his singing was often willful and musically inexact, but he often had legitimate theatrical reasons for doing so; and even so strict a judge as Toscanini thought the world of him as Mussorgsky's Boris Godunov and Boito's Mefistofele. Therefore, we must take him as a special case, as we will later on with yet another theatrical-musical genius, soprano Maria Callas.

Similarly, instrumental styles changed as well. The overt *schmaltz* of violinists such as Kubelik, Elman and even Kreisler, the most musical of the three, and pianists like Hoffman, Paderewski and Vladimir de Pachmann gave way to such cleaner players as Josef Szigeti,



Jacques Thibaud and Jascha Heifetz (Huberman was a special case, and will be discussed in the next chapter), Walter Gieseking, Alfred Cortot and Artur Schnabel.

It was not so much a case of just cleaning up the style as it was of their entire approach to music: a more score-accurate and rhythmically enlivened way of playing that avoided melodramatic gestures that sounded or felt artificial.

Heifetz, of course, is a special case. As the prize pupil of Leopold Auer, his debut at Carnegie Hall in the fall of 1917 created a stir unlike any since Huberman's performing the Brahms Concerto for Brahms himself when he was only ten years old.

Those who heard him in person describe an incredible, laser-like sound that "shot out" of the violin with razor-like intensity but also incredible beauty; but except for his acoustic records, which were recorded with a fairly normal balance, Heifetz insisted that his sound be miked at close range, which gave his playing an uncomfortable "edgy" quality. Nevertheless, the Heifetz recordings had perhaps the most profound impact on lay listeners and other violinists of any, at least in the years before 1932 and, for some, in the decades following. In almost every aspect of violinism except chamber music, where his laser-like tone dominated and never blended properly, Heifetz reigned supreme. Based on what he heard of him first through recordings, Serge Prokofiev wrote his Violin Concerto No. 2 for Heifetz, and his recording with Serge Koussevitzky and the Boston Symphony is still considered the watershed version. Here, as in his performances with such lyrical conductors as Arturo Toscanini, Leopold Stokowski and Charles Munch, Heifetz eschewed his usual "knock-them-dead" style, with its fussiness of vibrato and volume swells, in favor of a more continent, musical performance of great integrity. It has always been supposed that his first records were made for Victor in November and December 1917; but the year before he died, in 1986, an extraordinarily rare Russian disc from 1911—when he was only ten years old—was discovered of François Schubert's "The Bee" and Dvorak's "Humoresque." This disc has given us an even great perspective on his development as an artist; as one of the most-recorded violinists in the world, and despite the sound of his records with their "edgy" tone, one can trace his development from a player with a continent legato and extraordinary musical instincts to one who, except when in the company of those conductors already mentioned, chose to over-inflect his playing. Yet Heifetz always remained, at heart, a real artist, even if he didn't always manifest those qualities in concert or on records.

A problem: Recording an orchestra

From the very beginning of commercial records, capturing the sound of a classical orchestra was difficult if not impossible. During the acoustic era such masters of the baton as Nikisch, Toscanini, Karl Muck, Alfred Hertz, Albert Coates and Thomas Beecham all made records, and all of them deemed the results unsatisfactory. The problem was that a full symphony orchestra could hardly be fit into the cramped confines of a studio, and even if it could have been there was a problem of both balance and frequency range restrictions. Brass instruments tended to record the best, but they were by nature overpowering in sound to begin with. The winds always sounded somewhat distorted because of the lack of overtones, and bodies of strings tended to sound like an accordion. The engineers tried to solve the problem of non-projecting string tone by using souped-up instruments with horns projecting from the soundboard. These were called Stroh violins after their inventor, and their sound was annoying at best, shrill at worst.

Oddly enough, one conductor who was not even really a professional in his field managed to solve the problem more or less satisfactorily. He was Walter B. Rogers, the star cornetist in Sousa's Band, successor to Herbert C. Clarke. Victor's classical A&R man Emilio de Gogorza, apparently impressed upon hearing him conduct a concert, hired him as one of the very few studio orchestra leaders of his time to have his name on the record labels. Rogers worked for Victor between 1908 and 1920, and during that time distinguished himself by achieving a semi-natural orchestral balance on dozens of records by Caruso, McCormack, Farrar and Kreisler, including the Italian tenor's impressive series of "Martha" excerpts from 1912 and McCormack's famous recordings of "Il mio tesoro" from "Don Giovanni" and "O sleep, why dost thou leave me?" from Handel's "Semele."

Listening to the extended orchestral introduction to the quartet "Siam giunto, giovinetta" from "Martha"—the closest thing to a purely orchestral record that he ever made—one hears how it was done. Rogers placed the "weak" instruments that normally did not record well, such as flutes, clarinets and oboes, very close to the horn; basses and celli were next in sound perspective; then the violins and violas with their Stroh attachments, followed by the brass. Percussion was omitted entirely. More importantly, however, he had the entire orchestra play more softly in the studio than they would normally do in a concert. This gave the whole ensemble a lush, fuller sound than was normally possible when such fiery giants as Muck, Toscanini or Coates had them digging in and projecting emotionally as they would in a concert. Ironically, a similar approach was made by popular and jazz singers in the electrical era, as it was discovered that soft singing up close was more impressive on playback than full-voiced singing placed back from the microphone.

The first twenty years of the commercial phonograph industry, then, had been an exciting and musically valuable one, providing listeners with some timeless classics that would far outlive the makers of the discs; but almost no one, either consumers or industry insiders, could have possibly imagined how the next decade would change the entire business.